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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,373	09/26/2003	Sung Joon Bae	2658-0308P	1438
2292	7590	06/10/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			CHAN, EMILY Y	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	
			2829	

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EF

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/670,373	BAE ET AL.	
	Examiner	Art Unit	
	Emily Y. Chan	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 19-22 is/are allowed.  
 6) ☒ Claim(s) 1-6 and 9-18 is/are rejected.  
 7) ☒ Claim(s) 7, 8 and 23-26 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Claims 1, 3, 9-10 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Henley U S patent No. 5,073,754.

Henley ('754) is applied to claims 1, 3, 9-10 and 13-14 for the reason stated in the previous office action dated on 1-25-04.

2. Claims 2,4 and 11-12 are rejected under 35 U.S.C. 103(a) as being anticipated by Henley ('754) in view of Henley U S patent No. 5, 285, 150.

Henley ('754) in view of Henley ('150) is applied to claims 2,4 and 11-12 for the reason stated in the previous office action dated on 1-25-04. Note: Due to a careless typing error, claim 4 was not included in the previous rejection dated on 1-25-05.

3. Claims 5-6 and 15-18 are rejected under U.S.C. 103 (a) as being unpatentable over Henley ('754) in view of Kim et al US Publication No. 2004/0222814.

Regarding to claims 5 and 15, Henley ('754) discloses an apparatus and a method (see fig. 2 and abstract) for inspection a flat display device (10), comprising:

a magnetic sensor (40) for scanning a first signal wires (drive lines 14 and gate lines 16) along a first scan direction crossing the first signal wire and for scanning a second signal wire (drive lines 14 and gate lines 16) along a second scan direction crossing the second signal wire (see Col. 3, lines 65-68);

a detection circuit (PMU current sensor 38 and test controller 37) for detecting at least one of a short or an open circuit (shot circuit defect) in the

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signal wires (14 and 16) based on a current of the signal wires detected by the by the magnetic sensor (40) (see Col. 3, lines 3, line 50-67).

Henley ('754) does not disclose that his second signal wires is stacked on the first signal wires and an insulation layer is located between the first and second signal wires.

Henley ('754) also does not disclose that his detection circuit detects an interlayer short in the signal wires base on the current of signal wires detected by the magnetic sensor.

Kim et al ('281) disclose (see Figs. 9-16) a method and apparatus for inspecting flat panel display and exclusively teach to have that at least one of their second signal wires stacked on their first signal wires. Kim et al ('281) further disclose that their detection circuit for detecting an interlayer short in the signal wires (see paragraph (0034) of the specification).

It would have been obvious to one of ordinary skill in the art to add the feature of stacking the first signal wires to the second signal wires and detecting the interlayer short as taught by Kim et al ('281) into Henley ('754)'s magnetic sensor for the purpose of inspecting for bad wiring and pixels in a flat display device as disclosed by Kim et al ('281) (see page 1, paragraph (0002)).

Regarding to claim 16, Kim et al ('281) teach that his magnetic sensor comprises a GMR (a giant magneto-resistance sensor (see page 4, paragraph (0083)).

With respect to claim 17, Kim et al ('281) disclose a first power supply for supplying a first common voltage ( $V_h$ ) to one side of odd-numbered signal wires

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(see page 5, paragraph (0094)) and a second power supply for supplying a second common voltage (VI) different from the first common voltage to one side of even-numbered signal wires(see page 5, paragraph (0094)).

With respect to claims 6 and 18, Kim et al ('281) disclose that an other side of each of the first and second signal wires is maintained in an insulated state (see page 5, paragraph 0096).

#### ***Allowable Subject Matter***

4. Claims 7-8 and 19-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The reasons for indicating claims 7-8 and 19-22 are set forth in the previous office action dated on 1-25-05.

The added claims 23-26 are indicated allowable because the prior art in the record do not disclose or suggest a magnetic sensor used in an apparatus for inspection of a flat display device comprising a magnetic sensor with a gap less than a width of the signal wires as shown on Fig. 3 and explained on paragraph (0058) of the specification.

#### ***Response to Arguments***

6. Applicant's arguments filed 4-25-05 have been fully considered but they are not persuasive. Applicants argued, for claims 1,3,9-10,13and 14, that the reference (Henley '754) fails to disclose scanning over the signal lines. The

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examiner disagrees with applicants' assertion and points out that since Henley ('754) discloses a magnetic sensor 40 for scanning over drive lines and gate lines and since the claims of the instant invention do not specify that the signal line scanned by the magnetic sensor is materially or structurally different from the drive lines and gate lines, (Henley '754)'s drive lines and gate lines meet the claimed signal lines.

### ***Response to Amendment***

7. Applicant's amendment (by adding claims 23-26) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y. Chan whose telephone number is 571-272-1956. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EC  
6-7-05

  
**VINH NGUYEN**  
**PRIMARY EXAMINER**  
A.U. 2829  
06/09/05